SANTA CRUZ BIOTECHNOLOGY, INC.

# GRAF (Y-22): sc-130773

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

Cellular signaling by G proteins is downregulated by GTPase-activating proteins (GAPs), which increase the rate of GTP hydroylsis. The GTPase regulator associated with focal adhesion kinase (GRAF) has GAP activity toward Rho A and Cdc42, but not Rac 1. GRAF is ubiquitously expressed with high levels in heart and brain. Expression of GRAF causes clearing of stress fibers and formation of long Actin-based filopodial-like extensions. Fusion of MLL with GRAF, MLL/GRAF, is included in a rare genetic subgroup of acute myeloid leukemia (AML) cases.

## REFERENCES


1. Taylor, J.M., et al. 1998. Characterization of GRAF, the GTPase-activating protein for Rho associated with focal adhesion kinase. Phosphorylation and possible regulation by mitogen-activated protein kinase. J. Biol. Chem. 273: 8063-8070.
2. Taylor, J.M., et al. 1999. Cytoskeletal changes induced by GRAF, the GTPase regulator associated with focal adhesion kinase, are mediated by Rho. J. Cell Sci. 112: 231-242.
3. Sheffield, P.J., et al. 1999. Expression, purification and crystallization of a BH domain from the GTPase regulatory protein associated with focal adhesion kinase. Acta Crystallogr. D Biol. Crystallogr. 55: 356-359.
4. Borkhardt, A., et al. 2000. The human GRAF gene is fused to MLL in a unique t(5;11)(q31;q23) and both alleles are disrupted in three cases of myelodysplastic syndrome/acute myeloid leukemia with a deletion 5q. Proc. Natl. Acad. Sci. USA 97: 9168-9173.
5. Longenecker, K.L., et al. 2001. Structure of the BH domain from GRAF and its implications for Rho GTPase recognition. J. Biol. Chem. 275: 38605-38610.
6. Shibata, H., Oet al. 2001. PKNβ interacts with the SH3 domains of GRAF and a novel GRAF related protein, GRAF2, which are GTPase activating proteins for Rho family. J. Biochem. 130: 23-31.
7. Panagopoulos, I., et al. 2004. MLL/GRAF fusion in an infant acute monocytic leukemia (AML M5b) with a cytogenetically cryptic ins(5;11)(q31;q23q23). Genes Chromosomes Cancer 41: 400-404.


## CHROMOSOMAL LOCATION

Genetic locus: ARHGAP26 (human) mapping to 5q31.3; Arhgap26 (mouse) mapping to 18 B3.

## SOURCE

GRAF (Y-22) is a purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of GRAF of human origin.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## APPLICATIONS

GRAF (Y-22) is recommended for detection of GRAF of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

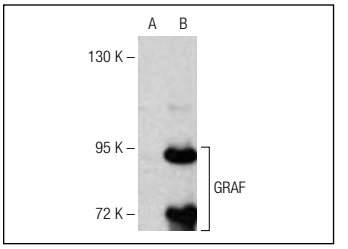
Suitable for use as control antibody for GRAF siRNA (h): sc-60755, GRAF siRNA (m): sc-60756, GRAF shRNA Plasmid (h): sc-60755-SH, GRAF shRNA Plasmid (m): sc-60756-SH, GRAF shRNA (h) Lentiviral Particles: sc-60755-V and GRAF shRNA (m) Lentiviral Particles: sc-60756-V.

Molecular Weight of GRAF: 95 kDa.

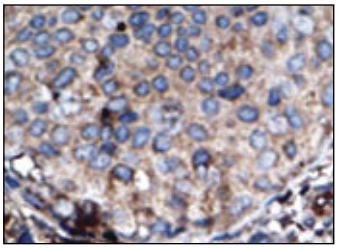
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA




GRAF (Y-22): sc-130773. Western blot analysis of GRAF expression in non-transfected (**A**) and human GRAF transfected (**B**) 293 whole cell lysates.



GRAF (Y-22): sc-130773. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast cancer tissue showing cytoplasmic localization.

## STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.